

# How to make a Force Sensor

## Introduction:

This worksheet describes how to make a force sensor which can measure the position of a platform which can be mimicked onscreen.

**Force Sensor In Action:** Below you can see the completed sensor in action.



## Ingredients:

- Used margarine/spread container
- 2 x coffee stirrers or lollipop sticks
- 3 x elastic bands
- Permanent marker or pen
- 10K potentiometer

**Step 1:** Cut out long rectangular hole in the end, and also a small hole in the side for the potentiometer to fit inside.



**Safety:** Please note that you use these resources at your own risk. Correct use of some components requires care.

**Step 2:** Insert the potentiometer and cut a small hole for the alignment tab to fit into.



**Step 3:** Take 2 stirrers and wrap elastic bands around as shown. The red band is placed in-between the 2 stirrers and the white band wrapped around them to hold them together.



**Step 4:** Place the stirrers around the potentiometer and add an elastic band to the other side of the shaft to squeeze them together.



**Step 5:** Rest the lid on the container and draw a shape as shown directly below where the red band is fixed to the stirrers.



**Step 6:** Cut along the lines and thread the elastic band through the hole before fixing the lid onto the container.



**Step 7:** Finally, turn the container upside down and connect sensor wires to the potentiometer as shown:

